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# FRACTURES

OF

## THE PATELLA,

### TREATED BY A RING,

WITH CASES.



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Another benefaction has been given to humanity by the Profession, in the treatment of a very difficult, though fortunately not very frequent, accident. The name of Dr. W. A. Gibson of St. Louis, U. S., will hereafter ever be honorably associated with the management of a fractured Patella ; for by the suggestion of a *ring*, he has not only simplified, but we think, probably perfected, a method for treating these cases, whether the bony solution be transverse, oblique, longitudinal, stellate, or by comminution. A moment's reflection will convince medical men that of all means proposed to retain the fragments of a fractured patella in contact, and thus promote bony union, instead of the ligamentous one usually obtained in practice, the ring must have great and decided advantage, and is so simple in application, that the thought almost involuntarily arises, Why was it not suggested sooner ? And this is the more surprising when we consider the many various methods employed to keep the fractured parts in contact. The two plates of metal shaped like a horse-shoe, to fix and bring together the fragments, invented by the late Mr. Lonsdale ; the plates with two sharp hooks, of M. Malgaigne, recently deceased ; and the practice of Mr. J. Wood, of King's College Hospital, London, consisting of strappings encircling the upper and lower margins of the broken bones, and then crossing each other at the sides of the point to be fastened to hooks attached to a wide splint in the popliteal region : would all seem suggestive of the value of a ring under these circumstances.

In the future treatment of fractures of the bone under consideration, a revolution may be predicted, and the prognosis, change, in the result, from ligamentous to bony union. For as Mr. Carsten Holthouse says, in "Holmes' Surgery," the great rareness of bony union in transverse fractures of the patella is owing simply to the difficulty of keeping the fragments in sufficiently close apposition ; *when this is accomplished*, bony union occurs as in other fractures.

The idea so long entertained in treating fractures of the patella by position, so as to relax the quadriceps femoris muscle, we see by the October No., 1866, of the London Medical Times and Gazette, is now being abandoned, and Mr. Paget, at St. Bartholemew's Hospital, has been treating his cases for the past three years in the *horizontal position*. When, too, we reflect that only one (the rectus femoris) of these four muscles arises from the pelvis, while the others, the crureus and the two vasti, have their attachments to the shaft of the femur itself, we must be convinced how little position can effect in these cases. The fact is that after a day or two, the muscles relax spontaneously and the easiest and most unrestrained position of the limb has been found not only the most agreeable to the patient, but as good in its results.

We now give the case furnishing the occasion for introducing the ring in the treatment of fractured patella, followed by the two in which it has been employed in this city. Dr. Gibson published this in the September No. of the *St. Louis Medical and Surgical Journal*. The patient, Mr. James Ferree, aged 35 years, had been the victim of rheumatism, and having so far recovered that he could use crutches, in attempting to get into a buggy, felt a sudden shock, as if some one had hit him with a stone on the knee, and could scarcely be convinced that the fracture was caused by muscular contraction.

"The patella of the left knee was fractured transversely through its middle, the fragments separating about one inch. I did not admire any of the modes of treatment for the fracture which I had ever seen recommended or used, and while hesitating as to what plan I would adopt, it occurred to me that a ring would answer the purpose. I therefore took a measurement of

the sound patella, and had a ring made of iron (allowing for padding), which I padded well with cotton wadding, cut in strips and wrapped around the ring, over which I applied a bandage. To each side of the ring I sewed strips of bandage. I then placed a well-padded splint twenty-four inches long to the posterior aspect of the leg and thigh, which I secured by a few turns of bandage at the lower and upper ends, the bandage being loose so as not to interfere with the circulation. I next brought the two fragments of bone into apposition, and placed the ring around the patella, and tied the strips of bandage over the splint, thus securely holding the ring in its place, and keeping the broken bone always in complete apposition, thereby giving the greatest possible chance for a bony union. At the expiration of thirty days, I removed the ring, and commenced passive motion of the limb, and to-day (June 15th) he has very good use of the limb. During the time this case was under treatment, I invited Drs. E. H. Gregory, J. J. McDowell, E. A. Clark, E. S. Frazier, and other physicians, to examine the appliance, and they all expressed the opinion that it was *just the thing* for a fractured patella. The advantages of the ring in the treatment of this troublesome fracture are so apparent, that it seems to me hardly necessary to point them out. The appliance did not give the patient the least pain, and there was no interruption of the circulation by the bandages. It was impossible in this case for the patella to escape from the ring, but possibly in some cases, as of women, when there is a good deal of adipose tissue, and but little prominence of the patella, it may not be so easy to apply the ring; but I am persuaded that it will give entire satisfaction in all cases. I claim by the application of the ring to have reduced one of the ugliest fractures of the human frame to one of the simplest for treatment.

"I report this case for the information of the profession, feeling confident from the perfect success of this case that the ring has never been used before, or we certainly would have been familiar with its use."

*Case 2d.*—On Sunday, the 28th day of last October, I was called to Lawson Marshall, a colored young man, who by a fall

on a rock, in a state of inebriation, had fractured the left patella, directly transverse, in about the middle of the bone. There existed a separation of some two or more inches between the fragments. He had apparently a good constitution, and was in excellent health.

The usual carved and straight splint was applied to the posterior surface of the limb after reduction of the fracture, as recommended by Sir Astley Cooper, viz., by a broad belt around the lower part of the thigh, just above the upper fragment, then by a long bandage passing down from it at right angles on one side, under the sole of the foot, from which extension was made by ascending the other side parallel to the leg, and securing it to the same circular belt.

Within two weeks after this, the September No. of the *St. Louis Journal* was received, the case of Dr. Gibson noticed, and his practice at once adopted. The ring was worn five weeks, the latter three without the posterior splint. At first it was padded, then applied directly to the surface. It is made of brass, softer than iron. It has answered every purpose in the treatment, and numerous witnesses, besides our class, saw this case, and all bear testimony to the great value of this method. I consider it the perfection (humanly speaking) in the treatment of fractures of this bone. One suggestion, however, is added, that the ring should be worn for three or four months, the patient being permitted to go about—mine refused to wear it longer than five weeks, making the whole treatment about seven weeks. The ring too might be slightly curved at the sides to which are secured the strips or bandlets to fasten it under the knee.

*Case 3d.*—By a railway accident, during the night of the 18th of December, Mr. G., aged 29 years, and of fair constitution, received an extensive contusion over the right lower extremity, falling as he thinks, with his knee against the stove of the car, which caused a transverse fracture of the patella. Such was the injury to the soft part that twelve days were required of active treatment to subdue the resulting inflammation, and more than thirty, after it, the discoloration in the integument of the limb is quite apparent. In the mean time, the family physi-

sician, Dr. Thomas Menees, the President of the Nashville Medical Society, had consulted me in regard to the best management of the case, and when the ring, as advised by Dr. Gibson, was proposed, he at once approved of it, had one made and applied. It has now been worn uninterruptedly three weeks, keeping the fragments in close apposition, and there exists every prospect of a bony union.

The patient was up to-day, the 21st of January, in his chair. With nothing but the ring on, he stood upright, of course not on the injured limb, and commenced passive motions in the knee-joint. For security he still wears a splint of binders' board when out of bed.

Dr. Menees is fully satisfied that this simple treatment fulfills every indication, and is the best yet devised for a broken patella.

*Feb'y 1st.*—This patient is out on the street, with a cane, ready to resume business. With the ring he not only walks well, but can flex the leg nearly at right angle without inconvenience.

